## THAT WHICH IS CLAIMED:

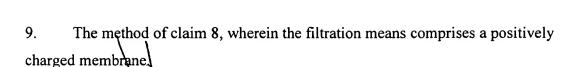


- 1. A method of preparing an activated polyethylene glycol (aPEG) solution that is stabile and substantially free of contaminants comprising:
  - (a)\ dissolving aPEG in a solvent in which said aPEG is stabile; and,
  - (b) filtering said dissolved aPEG through a filtration means which substantially reduces the levels of contaminants in the resulting filtered aPEG\solution, wherein contaminants are reduced by 90% or more.
- 10 2. The method of claim 1, wherein the aPEG is polyoxyethylene (α-carboxymethyl, ω-carboxymethoxypolyoxyethylene) (POE).
  - 3. The method of claim 2, wherein the solvent is selected from the group consisting of ethanol, methanol, acetonitale, dimethylsulfoxide, and tetrahydrofuran.

15

- 4. The method of claim 3, wherein the filtration means substantially reduces bioburden contaminant levels in the filtered aPEG solution.
- 5. The method of claim 4, wherein the filtration means reduces bioburden contaminant levels in the filtered aPEG solution to less than 1 CFU/ml.
  - 6. The method of claim 5, wherein the filtration means comprises a 0.2 micron micron Nylon 66 Posidyne filter.
- 7. The method of claim 4, wherein the filteration means substantially reduces endotoxin contaminant levels in the filtered aPEG solution.
  - 8. The method of claim 7, wherein the filtration means reduces endotoxin contaminant levels in the filtered aPEG solution by at least 500 EU/cm<sup>2</sup> of filter area.

30



- 10. The method of claim 8, wherein the filtration means comprises a positively charged resin.
- 11. The method of claim 8, wherein the filtration means comprises a 0.2 micron Nylon 66 Posidyne filter.
- 12. A method of preparing a chemically modified hemoglobin solution that is substantially free of contaminants comprising:
  - (a) dissolving an aPEG in a solvent suitable for addition to a hemoglobin solution and in which said aPEG is stabile;
  - (b) filtering said dissolved aPEG through a filtration means which substantially reduces the levels of contaminants in the resulting filtered aPEG solution; and,
  - (c) combining said resulting filtered aPEG solution with a hemoglobin solution in a combining means.
- 20 13. The method of claim 2, wherein the aPEG is POE.
  - 14. The method of claim 13, wherein the solvent is selected from the group consisting of ethanol, methanol, and acetonityle.
- 25 15. The method of claim 14, wherein the filtration means substantially reduces endotoxin contaminant levels in the filtered aPEG solution.
  - 16. The method of claim 15, wherein the filtration means reduces endotoxin contaminant levels in the filtered aPEG solution by at least 500 EU/cm<sup>2</sup> of filter area.

N X DOGSTREED DECE

15

5

30



5

- 17. The method of claim 16, wherein the filtration means comprises a 0.2 micron micron Nylon 66 Posidyne filter.
- 18. The method of claim 17, wherein the hemoglobin solution comprises pyridoxylated stroma-free hemoglobin.
- 19. The method of claim 18, wherein the filtration means and combining means are aseptically joined.